CEA AND CA 19-9 AS A PROGNOSTIC FACTOR TO PATIENTS WITH RIGHT AND LEFT COLON CANCER

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ABSTRACT

Background: Right and left colon cancer have different prognosis and management. Currently, gene mutations can be examined, namely MSI and BRAF to determine the prognosis and management of right and left colon cancer. However, molecular examination like this is still not routine because of various limitations. In several studies stated that increased levels of tumor markers CEA and CA 19-9 were associated with a decrease in survival rate and increased cancer recurrence. CEA and CA19-9 levels also have differences between right and left colon cancer. This difference of CEA and CA 19-9 is what may be a cause of different prognosis between right and left colon cancer.
Methods: This study was diagnostic test using a retrospective observational analytic research design, looking at the levels of pre-operative CEA and pre-operative CA 19-9 associated with the affected part of the colon and the patient's prognosis and patient stage.
Results: There were 41 samples that met the inclusion and exclusion criteria. there was a significant relationship between CEA (high = ≥5 ng/mL ;normal = <5 ng/mL) and CA 19-9 (high = ≥37 UI/mL ;normal = <37 UI/mL) with DFS (P = 0.020 OR = 9.60 ; P = 0.035 OR = 4.444) and 3-year survival rate (P = 0.024 OR = 4.80; P = 0.013; OR = 5.429). Based on the location of colon cancer, while level of CA 19-9 has the same level, significantly left colon cancer has higher recurrence rate (DFS P = 0.025) and faster mortality than right colon cancer (P = 0.032). Whereas in the same CEA level conditions, significantly left colon cancer recurrence was faster (DFS P = 0.014) than right colon cancer but there was no significant difference in mortality (P = 0.486).
Conclusion: There is a significant relationship between pre-operative CEA and pre-operative CA 19-9 with the prognosis of patients as measured by DFS or OS. Right and left colon cancer have different analysis values if associated with DFS and 3-year survival rate. Left-side colon cancer has a worse prognosis than right-side colon cancer.

Keywords: CEA, CA 19-9, Colon Cancer, Right Colon Cancer, Left Colon Cancer, Prognostic Factor.